CLAIMS

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1. A compound of formula (I):

R¹ is independently hydrogen, C₁₋₆ alkyl or C₃₋₆ cycloalkyl;

 R^2 is independently aryl, heteroaryl or a group $C_{1\text{--}6}alkylR^9,$ $CO(C_{1\text{--}6}alkyl)R^9$ or $SO_2(C_{1\text{--}6}alkyl)R^9;$

or R¹ and R² together with the nitrogen atom to which they are attached form a 4 to 7-membered saturated ring optionally containing a carbonyl group, O, S or N atom and optionally substituted by one or more C₁₋₆ alkyl, amino, hydroxy, CO₂C₁₋₆ alkyl, COC₁₋₆ alkyl, halogen, C₁₋₆ alkylhydroxy, NR¹⁰R¹¹ where R¹⁰ and R¹¹ are independently hydrogen, C₁₋₆ alkyl or together with the nitrogen atom to which they are attached form a 5- or 6-membered saturated ring optionally containing a further O, S or NR¹ group, C₁₋₆ alkylNR¹²R¹³ where R¹² and R¹³ are independently hydrogen or C₁₋₆ alkyl, CONR¹²R¹³, or optionally substituted by C₁₋₆alkylR⁹, aryl, phenoxy, COaryl, COheteroaryl or a heteroaryl group, the latter six groups being optionally substituted by halogen, amino, hydroxy, cyano, nitro, carboxy, CONR¹²R¹³, SO₂NR¹²R¹³, SO₂R¹², trifluoromethyl, NHSO₂R¹², NHCOR¹², ethylenedioxy, methylenedioxy, C₁₋₆ alkyl, C₁₋₆ alkoxy, C₁₋₆ alkyl NR¹⁰R¹¹, SR¹² or NR¹⁰R¹¹;

Het is a heteroaryl ring chosen from pyridine, pyrimidine, pyrazine, pyridazine or triazine and optionally substituted by halogen, amino, hydroxy, cyano, nitro, carboxy, $CONR^{12}R^{13}$, $SO_2NR^{12}R^{13}$, SO_2R^{12} , trifluoromethyl, $NHSO_2R^{12}$, $NHCOR^{12}$, C_{1-6} alkyl, C_{1-6} alkoxy, SR^{12} or $NR^{10}R^{11}$;

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R³ is independently hydrogen, C₁₋₆ alkyl or C₃₋₆ cycloalkyl;

 R^4 is independently hydrogen, C_{1-8} alkyl, C_{3-8} cycloalkyl, aryl C_{1-5} alkyl or heteroaryl C_{1-5} alkyl, the latter three groups being optionally substituted by one or more halogen, amino, hydroxy, C_{1-6} alkyl, C_{1-6} alkoxy, SR^{12} or $NR^{10}R^{11}$;

R⁵ is independently hydrogen, C₁₋₆ alkyl or C₃₋₆ cycloalkyl;

 R^6 is independently hydrogen, C_{1-6} alkyl or C_{3-6} cycloalkyl;

 R^7 is independently hydrogen, C_{1-6} alkyl or C_{3-6} cycloalkyl;

 R^8 is independently hydrogen, aryl, heteroaryl or C_{1-6} alkyl optionally substituted with one or more aryl, heteroaryl, halogen, amino, hydroxy, carboxy, $CONR^{12}R^{13}$, $SO_2NR^{12}R^{13}$, SO_2R^{12} , $NHSO_2R^{12}$, $NHCOR^{12}$, C_{1-6} alkyl, C_{3-6} cycloalkyl, C_{1-6} alkoxy, SR^{12} or $NR^{10}R^{11}$;

or a pharmaceutically acceptable salt thereof.

- A compound according to claim 1 in which R¹ is hydrogen or C₁₋₆alkyl and R² is
 CH₂R⁹ or CH₂CH₂R⁹ where R⁹ is phenyl or a 5- or 6-membered aromatic ring containing one or two heteroatoms and optionally substituted by C₁₋₆alkyl
 - 3. A compound according to claim 1 or 2 in which R¹ and R² form a piperidine, piperazine, pyrrolidine, morpholine, or thiomorpholine ring optionally substituted by CH₂OH, CH₂CH₂OH, hydroxy, CONH₂, phenyl, phenoxy, C(O)-furyl, the latter three groups being optionally substituted by halogen, in particular chloro
 - 4. A compound according to any one of claims 1 to 3 in which R³ is hydrogen.
- 5. A compound according to any one of claims 1 to 4 in which R⁴ is hydrogen.
 - 6. A compound according to any one of claims 1 to 5 in which R^5 is hydrogen or phenyl optionally substituted by C_{1-6} alkyl or C_{1-6} alkoxy.
- 35 7. A compound of formula (I) selected from:

- N~1~-[Cyano(2-methoxyphenyl)methyl]-N~2~-(2-morpholin-4-ylpyrimidin-4-yl)-Lleucinamide
- N~1~-[Cyano(2-methoxyphenyl)methyl]-N~2~-(2-piperazin-1-ylpyrimidin-4-yl)-Lleucinamide,
- N-[Cyano(2-methoxyphenyl)methyl]-N-(2-morpholin-4-ylpyrimidin-4-yl)-L-5 phenylalaninamide
 - N~1~-[Cyano(2-methoxyphenyl)methyl]-3-cyclohexyl-N~2~-(2-morpholin-4ylpyrimidin-4-yl)-L-alaninamide
 - N-[2-(Benzylamino)pyrimidin-4-yl]-N-(cyanomethyl)-L-phenylalaninamide
- N-{2-[Benzyl(methyl)amino]pyrimidin-4-yl}-N-(cyanomethyl)-L-phenylalaninamide 10 N-{2-[4-(4-Chlorophenyl)piperazin-1-yl]pyrimidin-4-yl}-N-(cyanomethyl)-Lphenylalaninamide
 - N~2~-[2-(Benzylamino)pyrimidin-4-yl]-N~1~-(cyanomethyl)-3-cyclohexyl-Lalaninamide
- N~2~-{2-[Benzyl(methyl)amino]pyrimidin-4-yl}-N~1~-(cyanomethyl)-3-cyclohexyl-15 L-alaninamide
 - cyclohexyl-L-alaninamide
 - $N\sim 1\sim -(Cyanomethyl)-N\sim 2\sim -(4-morpholin-4-ylpyrimidin-2-yl)-L-leucinamide$
- N~1~-(Cyanomethyl)-N~2~-(2-morpholin-4-ylpyrimidin-4-yl)-L-leucinamide 20 N~1~-(Cyanomethyl)-N~2~-[2-(4-hydroxy-4-phenylpiperidin-1-yl)pyrimidin-4-yl]-Lleucinamide
 - $N\sim1\sim-(Cyanomethyl)-N\sim2\sim-\{2-[methyl(pyridin-3-ylmethyl)amino]pyrimidin-4-yl\}-L-10-(Cyanomethyl)-N\sim2\sim-\{2-[methyl(pyridin-3-ylmethyl)amino]pyrimidin-4-yl\}-L-10-(Cyanomethyl)-N\sim2\sim-\{2-[methyl(pyridin-3-ylmethyl)amino]pyrimidin-4-yl\}-L-10-(Cyanomethyl)-N\sim2\sim-\{2-[methyl(pyridin-3-ylmethyl)amino]pyrimidin-4-yl\}-L-10-(Cyanomethyl)-N\sim2\sim-\{2-[methyl(pyridin-3-ylmethyl)amino]pyrimidin-4-yl\}-L-10-(Cyanomethyl)-N\sim2\sim-\{2-[methyl(pyridin-3-ylmethyl)amino]pyrimidin-4-yl\}-L-10-(Cyanomethyl)-N\sim2\sim-\{2-[methyl(pyridin-3-ylmethyl)amino]pyrimidin-4-yl\}-L-10-(Cyanomethyl)-N\sim2\sim-\{2-[methyl(pyridin-3-ylmethyl)amino]pyrimidin-4-yl\}-L-10-(Cyanomethyl)-N\sim2\sim-\{2-[methyl(pyridin-3-ylmethyl)amino]pyrimidin-4-yl]-L-10-(Cyanomethyl)-N\sim2\sim-\{2-[methyl(pyridin-3-ylmethyl)amino]pyrimidin-4-yl]-L-10-(Cyanomethyl)-N\sim2\sim-\{2-[methyl(pyridin-3-ylmethyl)amino]pyrimidin-4-yl]-L-10-(Cyanomethyl)-N\sim2\sim-\{2-[methyl(pyridin-3-ylmethyl)amino]pyrimidin-4-yl]-L-10-(Cyanomethyl)-N-10-(Cyano$ leucinamide
- N~2~-{2-[Benzyl(methyl)amino]pyrimidin-4-yl}-N~1~-(cyanomethyl)-L-leucinamide 25 leucinamide.
 - $N\sim2\sim-\{2-[4-(5-Chloropyridin-2-yl)piperazin-1-yl]pyrimidin-4-yl\}-N\sim1\sim-1-yl$ (cyanomethyl)-L-leucinamide,
- $N\sim1\sim-(Cyanomethyl)-N\sim2\sim-\{2-[methyl(thien-3-ylmethyl)amino]pyrimidin-4-yl\}-L-1\sim-(Cyanomethyl)-N\sim2\sim-\{2-[methyl(thien-3-ylmethyl)amino]pyrimidin-4-yl\}-L-1\sim-(Cyanomethyl)-N\sim2\sim-\{2-[methyl(thien-3-ylmethyl)amino]pyrimidin-4-yl\}-L-1\sim-(Cyanomethyl)-N\sim2\sim-\{2-[methyl(thien-3-ylmethyl)amino]pyrimidin-4-yl\}-L-1\sim-(Cyanomethyl)-N\sim2\sim-\{2-[methyl(thien-3-ylmethyl)amino]pyrimidin-4-yl\}-L-1\sim-(Cyanomethyl)-N\sim2\sim-\{2-[methyl(thien-3-ylmethyl)amino]pyrimidin-4-yl\}-L-1\sim-(Cyanomethyl)-N\sim2\sim$ 30 leucinamide
 - N~1~-(Cyanomethyl)-N~2~-(2-thiomorpholin-4-ylpyrimidin-4-yl)-L-leucinamide
 - N~1~-(Cyanomethyl)-N~2~-[2-(4-phenylpiperazin-1-yl)pyrimidin-4-yl]-L-leucinamide
 - N~1~-(Cyanomethyl)-N~2~-{2-[2-(hydroxymethyl)piperidin-1-yl]pyrimidin-4-yl}-L-
- leucinamide 35

 $N-1-(Cyanomethyl)-N-2-{2-[(2R)-2-(hydroxymethyl)pyrrolidin-1-yl]pyrimidin-4-yl}-L-leucinamide$

 $N\sim1\sim-(Cyanomethyl)-N\sim2\sim-[2-(4-hydroxypiperidin-1-yl)pyrimidin-4-yl]-L-leucinamide$

- N~1~-(Cyanomethyl)-N~2~-{2-[4-(2-furoyl)piperazin-1-yl]pyrimidin-4-yl}-L-N~2~-{2-[3-(Aminocarbonyl)piperidin-1-yl]pyrimidin-4-yl}-N~1~-(cyanomethyl)-L-leucinamide
 - $N\sim 1\sim -(Cyanomethyl)-N\sim 2\sim -\{2-[methyl(2-pyridin-2-ylethyl)amino]pyrimidin-4-yl\}-L-leucinamide$
- N~2~-[2-(4-Benzylpiperidin-1-yl)pyrimidin-4-yl]-N~1~-(cyanomethyl)-L-leucinamide N~1~-(Cyanomethyl)-N~2~-[2-(4-pyridin-2-ylpiperazin-1-yl)pyrimidin-4-yl]-L-leucinamide

 $N\sim1\sim-(Cyanomethyl)-N\sim2\sim-[2-(4-phenylpiperidin-1-yl)pyrimidin-4-yl]-L-leucinamide \\N\sim1\sim-(Cyanomethyl)-N\sim2\sim-\{2-[4-(2-hydroxyethyl)piperidin-1-yl]pyrimidin-4-yl\}-L-leucinamide \\N\sim1\sim-(Cyanomethyl)-N\sim2\sim-\{2-[4-(2-hydroxyethyl)piperidin-1-yl]pyrimidin-4-yl\}-L-leucinamide \\N\sim1\sim-(Cyanomethyl)-N\sim2\sim-\{2-[4-(2-hydroxyethyl)piperidin-1-yl]pyrimidin-4-yl\}-L-leucinamide \\N\sim1\sim-(Cyanomethyl)-N\sim2\sim-\{2-[4-(2-hydroxyethyl)piperidin-1-yl]pyrimidin-4-yl\}-L-leucinamide \\N\sim1\sim-(Cyanomethyl)-N\sim2\sim-\{2-[4-(2-hydroxyethyl)piperidin-1-yl]pyrimidin-4-yl\}-L-leucinamide \\N\sim1\sim-(Cyanomethyl)-N\sim2\sim-\{2-[4-(2-hydroxyethyl)piperidin-1-yl]pyrimidin-4-yl\}-L-leucinamide \\N\sim1\sim-(Cyanomethyl)-N\sim2\sim-\{2-[4-(2-hydroxyethyl)piperidin-1-yl]pyrimidin-4-yl\}-L-leucinamide \\N\sim1\sim-(Cyanomethyl)-N\sim2\sim-\{2-[4-(2-hydroxyethyl)piperidin-1-yl]pyrimidin-4-yl\}-L-leucinamide \\N\sim1\sim-(Cyanomethyl)-N\sim2\sim-\{2-[4-(2-hydroxyethyl)piperidin-1-yl]pyrimidin-4-yl\}-L-leucinamide \\N\sim1\sim-(Cyanomethyl)-N\sim2\sim-(Cyanome$

15 leucinamide

 $N\sim2\sim-\{2-[4-(3-Chlorophenyl)piperazin-1-yl]pyrimidin-4-yl\}-N\sim1\sim-(cyanomethyl)-L-leucinamide$

 $\label{eq:N-1-2} N-1 \sim (Cyanomethyl)-N-2 \sim -[2-(4-phenoxypiperidin-1-yl)pyrimidin-4-yl]-L-leucinamide$

- N~1~-(Cyanomethyl)-N~2~-[2-(3-phenylpyrrolidin-1-yl)pyrimidin-4-yl]-L-leucinamide
 - N~1~-(Cyanomethyl)-N~2~-(2-{methyl[(3-methylisoxazol-5-yl)methyl]amino} pyrimidin-4-yl)-L-leucinamide and pharmaceutically acceptable salts thereof.

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- 8. A compound of formula (I) as defined in any one of claims 1 to 7 for use in therapy.
- 9. A pharmaceutical composition which comprises a compound of the formula (I) as defined in any one of claims 1 to 7 or a pharmaceutically acceptable salt thereof and a pharmaceutically acceptable diluent or carrier.
- 10. A method for producing inhibition of a cysteine protease in a mammal, such as man, in need of such treatment, which comprises administering to said mammal an effective amount of a compound of the present invention as defined in any one of claims 1 to 7 or a pharmaceutically acceptable salt thereof.

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11. A method for treating pain, such as neuropathic pain, in a mammal, such as man, in need of such treatment, which comprises administering to said mammal an effective amount of a compound as defined in any one of claims 1 to 7, or a pharmaceutically acceptable salt thereof.

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